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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,801	07/30/2003	Naoto Abe	00862.002955.1	7926
5514 7590 03/14/2007 FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			EXAMINER LIANG, REGINA	
			ART UNIT 2629	PAPER NUMBER
			MAIL DATE 03/14/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/629,801	ABE ET AL.	
	Examiner	Art Unit	
	Regina Liang	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 32,35,39-41,47,50 and 51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 32,35,39-41,47, 50 and 51 is/are rejected.
- 7) ☒ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/26/07 has been entered. Claims 32, 35, 39-41, 47, 50 and 51 are pending in the application.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 47 and 51 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicant's remarks filed on 7/18/06, states that Figs. 35, 38 and page 77, line 4, et seq provide support for amended claim 47. However, the cited section does not provide support for the limitation as is now claimed in lines 8-11 of claim 47.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 32, 35, 39, 40 are rejected under 35 U.S.C. 102(e) as being anticipated by Murade (US 6,531,996).

As to claims 32, Murade discloses an image display apparatus comprising: a plurality of display devices (Fig. 12) wired in a matrix through a plurality of scanning signal wirings (Y1-Yn) and a plurality of modulated signal wirings (S1-Sn); and a driving circuit (data line driving circuit in Fig. 12) configured to apply modulated signal having a pulse width to each of said plurality of modulated signal wirings (S1-Sn), wherein the driving circuit (201, 301) has a plurality of transistors (precharging switch HR 201 and sampling switch SH 301, both switches are constructed in the form of N or P channel TFT, see col. 16, lines 62-63, col. 17, lines 22-23) connected in parallel to one of the plurality of modulated signal wirings (see Fig. 12, and col. 28, lines 31-36), wherein the plurality of transistors include a first transistor (precharging switch HR 201) and a second transistor (sampling switch SH 301), and a duration of a time period in which

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the first transistor is in an on state and a duration of a time period in which the second transistor is in an on state are different from each other (see Fig. 13, NR pulses are controlling the precharging switches HR, and NR pulse has a duration of a time period which is different than the duration of a time period of SH).

As to claim 35, Fig. 12 of Murade discloses wherein at least one of the pluralities of transistors is connected to a predetermined potential (sampling switch is connected to VID).

As to claim 39, Fig. 12 of Murade discloses a circuit (500, 501) for determining the operation states of the plurality of transistors.

As to claim 40, Murade discloses the driving circuit comprises a rise circuit for raising a signal level and a fall circuit for causing the signal level to fall (the clock circuits control raising signal level and falling signal level).

7. Claims 47, 51 are rejected under 35 U.S.C. 102(b) as being anticipated by Amano (US Patent No. 4,021,607).

As to claims 47, 51, Amano discloses an image display apparatus comprising: a plurality of display devices (1, Fig. 5) wired in a matrix through a plurality of scanning signal wirings (X1-X5, Fig. 5) and a plurality of modulated signal wirings (A1 to D4, Fig. 5); and a driving circuit (Fig. 5) configured to apply modulated signal having a pulse width (see Fig. 9) to each of said plurality of modulated signal wirings, wherein at least one pulse signal has a first portion at the leading edge of the pulse signal and a second portion at the trailing edge of the pulse signal, wherein in the first portion, a signal level of the pulse rises up to a first predetermined level which is lower than a maximum level of the pulse signal and is maintained at the first

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predetermined level, and wherein in the second portion, signal level of the pulse falls down to a second predetermined level which is lower than the maximum level of the pulse signal and is maintained at the second predetermined level (e.g. as shown in Fig. 9, the gray scale level 3 at the first 1/4th time period has a leading edge rising up to a level which is lower than the maximum level as shown in level 9, and the falling edge of the gray scale level 3 at the second 1/4th time period has a level lower than the maximum level).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murade in view of Ohba et al (US 5,309,150 hereinafter Ohba).

As to claim 41, Murade does not disclose the display device comprising an electron-emitting device. However, it is well known in the art that a display device comprising electron-emitting device (EL device in Ohba). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the display device of Murade to be an electron-emitting device so as to provide a display device with a greatly reduced electric power consumption.

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10. Claim 50 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murade in view of Maekawa et al (US 5,686,936 hereinafter Maekawa).

Murade does not disclose the time period in which the first transistor is in the on state partially overlaps the time period in which the second transistor is in the on state. However, Maekawa is cited to teach an active matrix display device similar to Murade. Fig. 2 and 4 of Maekawa teaches the first transistor (the precharging switch PSW) is in the on state ($\Phi P2$ in Fig. 2e) overlaps the time period ($\Phi H1$ in Fig. 2h) in which the second transistor (sampling switch HSW) is in the on state. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the display device of Murade to have feature as taught by Maekawa such that "the potential oscillation at the gate lines or power source line can be reduced" col. 3, lines 8-10 of Maekawa).

Response to Arguments

11. Applicant's arguments with respect to claims 32, 35, 39-41, 47, 50, 51 have been considered but are moot in view of the new ground(s) of rejection.

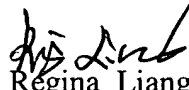
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Regina Liang whose telephone number is (571) 272-7693. The examiner can normally be reached on Monday-Friday from 8AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (571) 272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Regina Liang
Primary Examiner
Art Unit 2674

3/7/07